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RAW SEQUENCE LISTING

3 <110> APPLICANT: Barak, Larry S.

PATENT APPLICATION: US/10/054,616A

DATE: 10/31/2002 TIME: 17:06:19

Input Set . A:\033072-022.ST25.txt

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Oakley, Robert H.
 5
        Caron, Marc G.
        Laporte, Stephane A.
        Wilbanks, Alyson
 9 <120: TITLE OF INVENTION: Constitutively Desensitized G Protein-Coupled Receptors
11 <130: FILE REFERENCE: 033072-022
14 × 140: CUERENT APPLICATION NUMBER: US 10/054,616A
14 <141: CURRENT FILING DATE: 2002-01-22
16 - 150: PRIOR APPLICATION NUMBER: US 60/263,406
1" <151: PRIOR FILING DATE: 2001-01-23
19 <160: NUMBER OF SEQ ID NOS 12
21 <170: SOFTWARE: FastSEQ for Windows Version 4.0
23 < 210 SEQ ID NO: 1
24 < 211  LENGTH: 371
25 < 212: TYPE: PRT
26 < 213 : OEGANISM: Homo sapiens
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30 1 5
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ol Pro Ser Leu Pro Ser Ash Ser Ser Gln Glu Arg Pro Leu Asp Thr Arg
                                  25
33 Asp Fro Leu Leu Ala Arg Ala Glu Leu Ala Leu Ser Ile Val Phe
34 35
                              40
35 Val Ala Val Ala Leu Ser Ash Gly Leu Val Leu Ala Ala Leu Ala Arg
10
                          55
37 Arg Gly Arg Arg Gly His Trp Ala Pro Ile His Val Phe Ile Gly His
                                          75
39 Leu Cys Leu Ala Asp Leu Ala Val Ala Leu Phe Gin Val Leu Pro Gin
                 85
                                      90
41 Leu Ala Trp Lys Ala Thr Asp Arg Phe Arg Gly Pro Asp Ala Leu Cys
                                  105
              100
43 Ard Ala Val Lys Tyr Len Glr. Met Val Gly Met Tyr Ala Ser Ser Tyr
   : 15
                              -120
45 Met Ile Leu Ala Met Thr Leu Asp His His Arg Ala Ile Cys Arg Pro
                         135
                                             140
47 Met Len Ala Tyr Ard His Gly Ser Gly Ala His Trp Asn Ard Pro Val
                      150
                                         155
49 Leu Val Ala Trp Ala Phe Ser Leu Leu Ser Leu Pro Gln Leu Phe
į ()
                                     170
                  165
51 He Phe Ala Gln Arg Ash Val Glu Gly Gly Ser Gly Val Thr Asp Cys
                                  185
E3 Trp Ala Cys Phe Ala Glu Pro Trp Gly Arg Arg Thr Tyr Val Thr Trp
```

DATE: 10/31/2002 TIME: 17:06:19

PATENT APPLICATION: US/10/054,616A

Input Set : A:\033072-022.ST25.txt

5.4	195					200					205			
55 He Ala		Met	Val	Phe	Val		Pro	Thr	Leu	Gly	11e	Ala	Ala	Cys
16 210					215					220				
⊸7 Gln Val	Leu	11-	Phe	Arq	Glu	Ile	His	Ala	Ser	Leu	Val	Pro	Gly	Pro
78 225				230					235					240
59 Ser Glu	Arg	Pro		$G1_{T}$	Arg	Arg	Arq		Arg	Arg	Inr	Gly		Pro
r. ()			245		_		- 3	250	- 1				255	
-61 Gly Glu	GIŢ		His	Val.	ser	Ala		Val	Ala	Lys	Inr		Arg	Met
H2 H3 Thr Leu	** . 3	260	57.1		wai	1	265	Lou	Chic	Tro	Λla	270 Pro	Dho	Dho
-03 Thr Leu -+4	275	11.0	vai	vai.	vai	280	val	ьец	'- Y B	1.1.F.,	285	rio	FILE	rne
+5 Leu Val		Len	Trp	Ala	Ala		Aso	Pro	Glu	Ala		Leu	Glu	Glv
• 6 290	OIII	170,154	ı ı p	711 0	295	1 - F.	1101		314	300		23 0 0		0.2.1
67 Ala Pro	Phe	Val	Leu	Leu		Leu	Leu	Ala	Ser		Asn	Ser	Cys	Thr
+ 3 305				310					315					320
+9 Asn Pro	Trp	I1e	Tyr	Ala	ser	Phe	Ser	ser	ser	Val	Ser	Ser	Glu	Leu
1,1			325					330					335	
'l Arg Ser	Leu	Leu	Cys	Cys	Ala	Arg	Gly	Arg	Thr	Pro	Pro	Ser	Leu	Gly
2		340					345					350		
Ta Pro Gln		GD.	Ser	Cys	Thr		Ala	Ser	Ser	Ser		Ala	L∵s	Asp
14 15 Flore (1886)	355					360					365			
5 Thr Ser 570	ser													
79 k210° SI	eo in	n Mór-	5											
50 -2110 LI														
81 (212) TY			==											
~2 <213 > OF			Cale	1 2 22 1										
	COLLIA T	CHILD.	CHUTC	161 1	1ams i	.er								
44 <4000 SE				ıen r	1d IIIS I	.er								
84 (400) SE 85 Met Asn	EQUEN	ICE:	2				His	Asn	Thr	Ser	Ala	Pro	Ala	Gln
→ Met Asn	EQUEN Pro	CE: Asp	2 Leu Î	Asp	Thr	Gly		1 U					10	
#5 Met Asn 1 37 Trp Gly	EQUEN Pro	ICE: Asp Leu	2 Leu Î	Asp	Thr	Gly	Ph€	1 U				Gln	10	
#6 Met Asn . 1 87 Trp Gly	EQUEN Pro Glu	Asp Leu 20	2 Leu 1 Lys	Asp Asp	Thr Ala	Gl _Y Asn	Phe 25	ı∪ Thr	Gly	Pro	Asn	Gln 30	10 Thr	Ser
HA Met Asn 1 1 BT Trp Gly 88 89 Ser Asn	EQUEN Pro Glu Ser	Asp Leu 20	2 Leu 1 Lys	Asp Asp	Thr Ala	Gly Asn Leu	Phe 25	ı∪ Thr	Gly	Pro	Asn Ala	Gln 30	10 Thr	Ser
HA Met Asn 1 1 HT Trp Gly 88 W9 Ser Asn 90	EQUEN Pro Glu Ser 35	CE: Asp Leu 20 Thr	2 Leu Lys Leu	Asp Asp Pro	Thr Ala Gln	Gly Asn Leu 40	Ph⊖ 25 Asp	Thr Val	Gly Thr	Pro Arg	Asn Ala 45	Gln 30 Ile	Thr Ser	Ser Val
His Met Asn 1 87 Trp Gly 88 As Ser Asn 90 91 Gly Leu	EQUEN Pro Glu Ser 35	CE: Asp Leu 20 Thr	2 Leu Lys Leu	Asp Asp Pro	Thr Ala Gln Phe	Gly Asn Leu 40	Ph⊖ 25 Asp	Thr Val	Gly Thr	Pro Arg	Asn Ala 45	Gln 30 Ile	Thr Ser	Ser Val
#5 Met Asn 1 1 87 Trp Gly #8 89 Ser Asn #6 Gly Leu #1 Gly Leu #2 50	EQUEN Pro Glu Ser 35 Val	ICE: Asp Leu 20 Thr	2 Leu Lys Leu Gly	Asp Asp Pro Ala	Thr Ala Gln Phe 55	Gly Asn Leu 40 Ile	Phe 25 Asp Leu	Thr Val Phe	Gly Thr Ala	Pro Arg Ile	Asn Ala 45 Val	Gln 30 Ile Gly	Thr Ser Asn	Ser Val Ile
His Met Asn 1 RT Trp Gly AS BS Ser Asn GS GS Gly Leu GS 50 GS Leu Val	EQUEN Pro Glu Ser 35 Val	ICE: Asp Leu 20 Thr	2 Leu Lys Leu Gly	Asp Asp Pro Ala Val	Thr Ala Gln Phe 55	Gly Asn Leu 40 Ile	Phe 25 Asp Leu	Thr Val Phe	Gly Thr Ala	Pro Arg Ile	Asn Ala 45 Val	Gln 30 Ile Gly	Thr Ser Asn	Ser Val Ile
#5 Met Asn 1 87 Trp Gly 88 Ser Asn 90 91 Gly Leu 92 50 93 Leu Val 94 65	EQUEN Pro Glu Ser 35 Val	ASP Leu 20 Thr Leu Leu	Leu Lys Leu Gly	Asp Asp Pro Ala Val	Thr Ala Gln Phe 55 Ala	Gly Asn Leu 40 Ile Cys	Phe 25 Asp Leu Asn	Thr Val Phe	Gly Thr Ala His 75	Pro Arg Ile 60 Leu	Asn Ala 45 Val	Gln 30 Ile Gly Thr	Thr Ser Asn Pro	Ser Val Ile Thr 80
His Met Asn 1 RT Trp Gly AS BS Ser Asn GS GS Gly Leu GS 50 GS Leu Val	EQUEN Pro Glu Ser 35 Val	ASP Leu 20 Thr Leu Leu	Leu Lys Leu Gly Ser	Asp Asp Pro Ala Val	Thr Ala Gln Phe 55 Ala	Gly Asn Leu 40 Ile Cys	Phe 25 Asp Leu Asn	Thr Val Phe	Gly Thr Ala His 75	Pro Arg Ile 60 Leu	Asn Ala 45 Val	Gln 30 Ile Gly Thr	Thr Ser Asn Pro	Ser Val Ile Thr 80
#6 Met Asn 1 87 Trp Gly 88 Ser Asn 90 91 Gly Leu 92 50 93 Leu Val 94 65 95 Asn Tyr	EQUEN Pro Glu Ser 35 Val Ile	ASP Leu 20 Thr Leu Leu 110	Leu Lys Leu Gly Ser Val 85	Asp Pro Ala Val 70 Asn	Thr Ala Gln Phe 55 Ala Leu	Gly Asn Leu 40 Ile Cys Ala	Phe 25 Asp Leu Asn	Thr Val Phe Arq Ala	Gly Thr Ala His 75 Asp	Pro Arg Ile 60 Leu Leu	Asn Ala 45 Val Arg	Gln 30 Ile Gly Thr	Thr Ser Asn Pro Ser 95	Ser Val Ile Thr 80 Phe
#6 Met Asn 1 87 Trp Gly 88 Ser Asn 90 91 Gly Leu 92 50 93 Leu Val 94 65 95 Asn Tyr 96 97 Thr Val 98	EQUENT Pro Glu Ser 35 Val He Phe Leu	Leu 20 Thr Leu Leu 11e Pro 100	Leu Lys Leu Gly Ser Val 85 Phe	Asp Pro Ala Val 70 Asn Ser	Thr Ala Gln Phe 55 Ala Leu Ala	Gly Asn Leu 40 Ile Cys Ala Thr	Phe 25 Asp Leu Asn Ile	Thr Val Phe Arq Ala 90 Glu	Gly Thr Ala His 75 Asp Val	Pro Arg Ile 60 Leu Leu	Asn Ala 45 Val Arg Leu Gly	Gln 30 Ile Gly Thr Leu	Thr Ser Asn Pro Ser 95 Trp	Ser Val Ile Thr 80 Phe Val
#5 Met Asn 1	EQUENT Pro-Glu Ser 35 Val He Phe Leu Arq	Leu 20 Thr Leu Leu 11e Pro 100 11e	Leu Lys Leu Gly Ser Val 85 Phe	Asp Pro Ala Val 70 Asn Ser	Thr Ala Gln Phe 55 Ala Leu Ala	Gly Asn Leu 40 Ile Cys Ala Thr	Phe 25 Asp Leu Asn 11e Leu 105 Trp	Thr Val Phe Arq Ala 90 Glu	Gly Thr Ala His 75 Asp Val	Pro Arg Ile 60 Leu Leu	Asn Ala 45 Val Arg Leu Gly Asp	Gln 30 11e Gly Thr Leu Tyr 110 Val	Thr Ser Asn Pro Ser 95 Trp	Ser Val Ile Thr 80 Phe Val
#5 Met Asn 1	EQUENT Pro-Glu Ser 35 Val He Phe Leu Arq 115	Leu 20 Thr Leu Leu 11e Pro 100 11e	Leu Lys Leu Gly Ser Val 85 Phe	Asp Asp Pro Ala Val 70 Asn Ser	Thr Ala Gln Phe 55 Ala Leu Ala Asp	Gly Asn Leu 40 Ile Cys Ala Thr	Phe 25 Asp Leu Asn 11e Leu 105 Trp	Thr Val Phe Arq Ala 90 Glu Ala	Gly Thr Ala His 75 Asp Val	Pro Arg Ile 60 Leu Leu Leu	Asn Ala 45 Val Arg Leu Gly Asp 125	Gln 30 11e Gly Thr Leu Tyr 110 Val	Thr Ser Asn Pro Ser 95 Trp Leu	Ser Val He Thr 80 Pho Val Cys
#5 Met Asn 1 87 Trp Gly 88 89 Ser Asn 90 91 Gly Leu 92 50 93 Leu Val 94 65 95 Asn Tyr 96 97 Thr Val 98 99 Leu Gly 160 101 Cys Thr	EQUENT Pro- Glu Ser 35 Val Ile Phe Leu Arq 115	Leu 20 Thr Leu Leu 11e Pro 100 11e	Leu Lys Leu Gly Ser Val 85 Phe	Asp Asp Pro Ala Val 70 Asn Ser	Thr Ala Gln Phe 55 Ala Leu Ala Asp	Gly Asn Leu 40 Ile Cys Ala Thr Ile 120	Phe 25 Asp Leu Asn 11e Leu 105 Trp	Thr Val Phe Arq Ala 90 Glu Ala	Gly Thr Ala His 75 Asp Val	Pro Arg He 60 Leu Leu Leu Val	Asn Ala 45 Val Arg Leu Gly Asp 125	Gln 30 11e Gly Thr Leu Tyr 110 Val	Thr Ser Asn Pro Ser 95 Trp Leu	Ser Val He Thr 80 Pho Val Cys
#5 Met Asn 1	EQUENT Pro- Glu Ser 35 Val Ile Phe Leu Arq 115 c Ala	Leu 20 Thr Leu Leu 11e Pro 100 11e	Leu I Lys Leu Gly Ser Val 85 Phe Phe	Asp Asp Pro Ala Val 70 Asn Ser Cys	Thr Ala Gln Phe 55 Ala Leu Ala Asp 1 Ser 135	Gly Asn Leu 40 Ile Cys Ala Thr Ile 120 Tieu	Phe 25 Asp Leu Asn Ile Leu 105 Trp	Thr Val Phe Arq Ala 90 Glu Ala	Gly Thr Ala His 75 Asp Val Ala	Pro Arg He 60 Leu Leu Leu Val 9 Ser 140	Asn Ala 45 Val Arg Leu Gly Asp 125 - Ile	Gln 30 11c Gly Thr Leu Tyr 110 val 5 Asp	Thr Ser Asn Pro Ser 95 Trp Leu O Glu	Ser Val Thr 80 Phe Val Cys
#5 Met Asn 1	EQUENT Pro- Glu Ser 35 Val Ile Phe Leu Arq 115 c Ala	Leu 20 Thr Leu Leu 11e Pro 100 11e	Leu I Lys Leu Gly Ser Val 85 Phe Phe	Asp Asp Pro Ala Val 70 Asn Ser Cys	Thr Ala Gln Phe 55 Ala Leu Ala Asp 1 Ser 135	Gly Asn Leu 40 Ile Cys Ala Thr Ile 120 Tieu	Phe 25 Asp Leu Asn Ile Leu 105 Trp	Thr Val Phe Arq Ala 90 Glu Ala	Gly Thr Ala His 75 Asp Val Ala Ile	Pro Arg He 60 Leu Leu Leu Leu 140 Val	Asn Ala 45 Val Arg Leu Gly Asp 125 - Ile	Gln 30 11c Gly Thr Leu Tyr 110 val 5 Asp	Thr Ser Asn Pro Ser 95 Trp Leu O Glu	Ser Val Thr 80 Phe Val Cys Tyr G Arg
#5 Met Asn 1	EQUENT Pro- Glu Ser 35 Val He Phe Leu Arq H15 c Ala	Leu 20 Thr Leu 11e Pro 100 Ile Ser Arg	Leu Lys Leu Gly Ser Val 85 Phe Phe Tle	Asp Asp Pro Ala Val 70 Asn Ser Cys	Thr Ala Gln Phe 55 Ala Leu Ala Asp 1 Ser 135 5 Leu	Gly Asn Leu 40 Ile Cys Ala Thr Ile 120 Leu i Glr	Phe 25 Asp Leu Asn He 105 Trp Cys	Thr Val Phe Arq Ala 90 Glu Ala S Ala	Thr Ala His 75 Asp Val Ala Ile Thr	Pro Arg He 60 Leu Leu Leu Val Val P Ser 140 r Leu 5	Asn Ala 45 Val Arq Leu Gly Asp 125 Tle	Gln 30 Ile Gly Thr Leu Tyr 110 Val 5 Asp	Thr Ser Asn Pro Ser 95 Trp Leu Calcump Gluer	Val Thr 80 Phe Val Cys Lyr Arg 160

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1.07					165					170					175	
106	(3	T 1 a	<i>(</i> 21	Fire	165	Leva	(21	Theres	Lys		Dro	د ۱۸	Dro	Non	_	1.en
	Ser	116	СΕТУ	130	i de la	1.61	GL,	пр	185	GIU	rio	Mid	PIC	190	Sel.	.154
108	Luc	clo	Cuc		Val.	The	Clu	aln	Pro	Pho	fur	Ala	Leu		Ser	Ser
11.	L) S	UIL	195	O.T.	V (3. I.	I iII.	GIG	200	FIO	L 116	1 1 1	niu	205	1 110.	OC I	20.1
	Lou	<i>(</i> 21.0)		Oho	T'	T Las	Dran		Ala	Val	He	Lou		Met	Tur	a va
112	Letu	210	26:1	F 1170	1 7 1	1 1.50	215	1.0 (1	1110	va i	110	220	, (41	110 0	1 1 1	. 1 5
	Ara		Tvv	1.1.5	Ma 1	ΔΙ.		Δra	Thr	Thr	Tite		Lei	Glu	Ala	019
114		val	1) 1	1 1.40	V 12 1.	230	Ly	rri di	1 111	1111	235	11011	110.01	.5 4. 04		240
		МОТ	1 770	ta i re	Mart		Agr	Ser	LYS	(411)		1 h r	Lei.	Ara	TTe	
116	vai	1.16 C	Ljo	(J 1 ' 1	245	نة بي ال	1101.	JCI	Lin	250	111.04	1 11.1	2	;	255	
	Sor	Lve	Δen	Dha		G1:	Asr	Thr	Leu		Ser	Thr	Lvs	Ala		Glv
113	D(, L	12 1 27	112,111	260	111.2	G.LL	F	1111	265	C. C. I	2			270	1	2
	His	Asn	Pro		Ser	Ser	Il⊖	Ala	Val	Lvs	Leu	Phe	Lys		Ser	Arq
125	111.5	11511	275	,				280		7 -			285			
	G n	lvs		Ala	Ala	LVS	Thr		Gly	11e	V-ā l	Val	Glv	Met	Pł.⊖	He
122		290	27 (295		1			300	1			
			Tro	Len	Pro	Pho		He	Ala	Leu	Pro	Leu	Glv	3er	Leu	Pho
1.1		. 2 -				310					315		•			320
		Thr	Leui	Lys	Pro	Pro	Asr	Ala	Val	Pho	1.78	Val	Val	Phe	Trp	Le∵
12+				•	325		•			330					335	
12.7	Gly	Tyr	Pho	Asn	Sor	Cys	Leu	Asn	Pro	$\Pi \vdash \emptyset$	11e	Tyr	Pro	Cys	Ser	ser
124	·	-		340					345					350		
124	Lys	Glu	Phe	Lys	Arq	Alá	₽h⊜	Mert	Arg	Ile	$L\!\in\! U$	G1y	C_{YS}	Gln	Cys	Arg
1.0	-		355					360					365			
$1 \ge 1$	Ser	Gly	Arg	Arq	Arg	Arg	Arg	Arq	Arg	Arg	Leu	G17	Ala	Cys	Ala	Γ_{x} r
1 : 2		370					375					380				
13.3	Thr	Tyr	Arg	Pro	Trp	Thr	Arg	Gly	Gly	$\mathcal{S}\!\!\in\! r$		Glu	Arg	ser	Gln	З⊜г
1.5.4						390					395					40€
E or J	11 9	3	400	تعاث	Lucia	Ash	ASP	Set	Sily	$S(\epsilon, 1)$	Cys	∺et	Set	$\Im 1_{T}$		114.67
136					405					410					415	
137	Arg	Thr	Le-1		Ser	Ala	Ser	Pro	ser	019	Gly	Гуг	Leu		Arg	Gly
138				420					425					430	_	- 1
	Ala	Gln		Pro	L.eu	Glu	Leu		Ala	Tir	Pro	Glu		L;s	Ser	Gly
140			435					440					4.4.5	_	_	
			L∈u	Ser	Leu	Pro		Pro	Pro	GIŞ	Arq		GIŢ	Arg	Leu	Asp
142		450	_	_	~: 1	m. I	455					460	T)	.7.1	a	T)
		Gly	Pro	Leu	Phe		Phe	Lys	Leu	Leu		GIU	Pro	GIU	Ser	
144						470				a1	475		7	77.1	-1	480
	GLY	hr	Glu	GLY		Ala	ser	ASI	Gly		Cys	ASP	Ald	1111	495	ASP
146			•	<i>(</i> 2.1	485	D		nh a	T	490	Nan	Most	Dec	T 211		Deco
	Leu	иla	ASI		GIN	FTU	GIY	Fue,	Lys	261	ASII	MC C	PLO	510	Ald	PIO
148	. 1 1	11: ~	nk -	500					505					JIU		
	13 I. Y	His	515													
150 153	. 2.17). cr) N O:	. 3											
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PATENT APPLICATION: US/10/054,616A

DAIE: 10/31/2002 IIME: 17:06:19

Input Set : A:\033072-022.ST25.txt

				VCE:												
159	Met	Asn	Pro	Asp	$L\!\in\! u$	Asp	Thr	GlŢ	His	Asn	Thr	Ser	Ala	Pro		C_1^*D
160	1				5.					10					15	_
$1 \leftarrow 1$	Lt.	Gly	Glu	Leu	LŢS	Asp	Ala	Asn		Thr	Gly	Pro	Asn		Tr.r	ser
$1 \mathrm{hz}$				20					25	** 1	T 1		. 1 -	30	(3	Ma 1
	Ser	Asn		Thr	Leu	Pro	GIn		Asp	Val	Inr	Arq		110	Ser	vai
1+.4			35			- 1	5.1	40		n.i	. 1 .	T 1 -	45	(3.1	7 ~ ~	* 1 .s
	Gly		Val	Leu	GIF	Ala		He	Leu	Pne	Ala		Val	GIT	ASII	. re
166	_	50	T 1 .	T	Cl	11-1	55	Cua	1	λωσ	Hic	60 Loui	Arver	The	Dro	Thr
		Vàl	116	Leu	Ser	70	Ald	Cys	Abi.	Arg	75	Le'u	мгу	1 1111	PIU	80
168		Tur	nh.a	Ile	x7 = 1		Lon	Λla	Tla	Δla		T 45+11	Len	Len	Ser	
$\frac{100}{100}$	ASII	LYL	PIRE	116	85	ASL	LEU	MIG	1, 1, 15;	90	UDF.	L'. a	A. N. J.	1100	95	. 110
	The	Va 1	Leu	Pro		Sor	Δla	Thr	Τ ⇔11		Val	I.e·ti	Glv	Tvr		Val
172	1111	Vai	пс.ч	100	1 11.	L/C. L	1,1.54	1 111	105	0.0	,	.,		110	1	
	r,=n	Glv	Ara	Ile	Phe	CVS	Asp	He		Ala	Ala	Vàl	Asp	Val	Leu	Cys
1 7 4			115			•	*	120	•				125			
175	Cys	Thr	Ala	ser	Ile	Leu	ser	Leu	$C_I^{*}S$	Ala	11e	Ser	$I, l \in$	Asp	Ala	Tyr
176		130					135					-140				
1	Ile∙	Gly	Vāl	Arg	$T \supseteq r$	ser	$\Gamma \oplus \Gamma$	Gln	$\Gamma_2 \cdot \Gamma$	Pro	Thr	Leu	Val	Thr	Arq	Arq
	145					150					15 E					160
17.9	Lys	Ala	I $1 \in$	Leu		Leu	Leu	ser	Va l		Val	Leu	ser	Thr		Πe
130					165					170					175	
	3⊕r	He	GL_{Y}	Pro	Leu	Leu	Gly	Trp		Glu	Pro	Ala	Pro		Asp	Asp
18.				180					135					190		
														151	O	
	Lys	Glu		$G1_{Y}$	Val	Thr	Glu		Pro	Phe	Tyr	Ala		Phe	Ser	ser
184			195					200					205			
$\frac{184}{185}$		Gly	195	Gly			Pro	200				Leu	205			
$ \begin{array}{r} 184 \\ 185 \\ 186 \end{array} $	Leu	Gly 210	195 Ser	Phe	Tyr	Ile	Pro 215	200 Leu	Alā	Val	Il⊕	Leu 220	205 Val	Met	Tyr	Cys
184 185 186 107	Leu Arg	Gly 210	195 Ser		Tyr	lle Ald	Pro 215	200 Leu	Alā	Val	Il⊕	Leu 220	205 Val	Met	Tyr	Cys
184 185 186 164 188	Leu Arg 225	Gly 210 vai	195 Ser Tyr	Phe TTe	Tyr	11e Ara 230	Pro 215 Lys	200 Leu Arq	Ala Inr	Val Ini	Ile Lys 235	Leu 220 Asn	205 Val Leu	Met Gru	Tyr Ala	Cys 617 240
184 185 186 164 188	Leu Arg 225	Gly 210 vai	195 Ser Tyr	Phe	Tyr	11e Ara 230	Pro 215 Lys	200 Leu Arq	Ala Inr	Val Ini	Ile Lys 235	Leu 220 Asn	205 Val Leu	Met Gru	Tyr Ala	Cys 617 240
184 185 186 187 188 189	Leu Arg 225 Val	Gly 210 var Met	195 Ser Tyr Lys	Phe TTe	Tyr vai Met 245	lle Aid 230 Ser	Pro 215 Lys Asr.	200 Leu Arq Ser	Ala Inr Lys	Val Inr Glu 250	lle Lys 235 Leu	Leu 220 Asn Thr	205 Val Leu Leu	Met Gru Arq	Tyr Ala Ile 255	Cys GTY 240 His
184 185 186 167 188 189 190 191	Leu Arg 225 Val Ser	Gly 210 Val Met	195 Ser Tyr Lys Asn	Pho TTe Glu Pho 260	Tyr var Met 245 His	lle Ala 230 Ser Glu	Pro 215 Lys Asn Asp	200 Leu Arq Ser Thr	Ala Inr Lys Leu 263	Val Inr Glu 250 Ser	lle Lys 235 Leu Ser	Leu 220 Asn Thr	205 Val Leu Leu	Met Gru Arq Ala 270	Tyr Ala Ile 255 Lys	Cys Gly 240 His
184 185 186 167 188 189 190 191	Leu Arg 225 Val Ser	Gly 210 Val Met	195 Ser Tyr Lys Asn Pro	Pho Tie Glu Pho	Tyr var Met 245 His	lle Ala 230 Ser Glu	Pro 215 Lys Asn Asp	200 Leu Arq Ser Thr	Ala Inr Lys Leu 263	Val Inr Glu 250 Ser	lle Lys 235 Leu Ser	Leu 220 Asn Thr	205 Val Leu Lys	Met Gru Arq Ala 270	Tyr Ala Ile 255 Lys	Cys Gly 240 His
184 185 186 189 189 191 191 193	Leu Arg 225 Val Ser His	Gly 210 Val Met Lys Asn	195 Ser Tyr Lys Asn Pro	Pho TTo Glu Pho 260 Arg	Tyr vai Met 245 His	Ald 230 Ser Glu Ser	Pro 215 Lys Asn Asp	200 Leu Ard Ser Thr Ala 280	Ala Inr Lys Leu 265 Val	Val Inr Glu 250 Ser Lys	lle Lys 235 Leu Ser Leu	Leu 220 Asn Thr Thr	205 Val Leu Leu Lys Lys 285	Met Gru Arq Ala 270 Phe	Tyr Ala Ile 255 Lys Ser	Cys Gly 240 His Gly
184 185 186 189 189 191 191 193	Leu Arg 225 Val Ser His	Gly 210 Vai Met Lys Asn	195 Ser Tyr Lys Asn Pro	Pho TTe Glu Pho 260	Tyr vai Met 245 His	Ald 230 Ser Glu Ser	Pro 215 Lys Asn Asp Ile Thr	200 Leu Ard Ser Thr Ala 280	Ala Inr Lys Leu 265 Val	Val Inr Glu 250 Ser Lys	lle Lys 235 Leu Ser Leu	Leu 220 Asn Thr Thr Phe Val	205 Val Leu Leu Lys Lys 285	Met Gru Arq Ala 270 Phe	Tyr Ala Ile 255 Lys Ser	Cys Gly 240 His Gly
184 185 186 187 188 189 190 191 193 194 195	Leu Arg 225 Val Ser His	Gly 210 Vai Met Lys Asn Lys 290	195 Ser Tyr Lys Asn Pro 275 Lys	Pho Tie Glu Pho 260 Ard	Tyr var Met 245 His Ser Ala	Ala 230 Ser Glu Ser Lys	Pro 215 Lys Asn Asp Ile Thr 295	200 Leu Ard Ser Thr Ala 280 Leu	Ala Inr Lys Leu 265 Val	Val Inr Glu 250 Ser Lys Ile	Lys 235 Leu Ser Leu Val	Leu 220 Asn Thr Thr Pho Val 300	205 Val Leu Lys Lys 285 Gly	Met Giu Arq Ala 270 Phe Met	Tyr Ala Ile 255 Lys Ser Phe	Cys Gly Ard Ile
184 185 186 187 188 189 190 191 192 193 194 195 196	Leu Arg 225 Val Ser His Glu Leu	Gly 210 Vai Met Lys Asn Lys 290	195 Ser Tyr Lys Asn Pro 275 Lys	Pho TTo Glu Pho 260 Arg	Tyr var Met 245 His Ser Ala	Ala 230 Ser Glu Ser Lys	Pro 215 Lys Asn Asp Ile Thr 295	200 Leu Ard Ser Thr Ala 280 Leu	Ala Inr Lys Leu 265 Val	Val Inr Glu 250 Ser Lys Ile	Lys 235 Leu Ser Leu Val	Leu 220 Asn Thr Thr Pho Val 300	205 Val Leu Lys Lys 285 Gly	Met Giu Arq Ala 270 Phe Met	Tyr Ala Ile 255 Lys Ser Phe	Cys Gly 240 His Gly Ard Ile
184 185 186 187 188 189 190 191 192 193 194 195 196 197	Leu Arg 225 Val Ser His Glu Leu 305	Gly 210 Val Met Lys Asn Lys 290 Cys	195 Ser Tyr Lys Asn Pro 275 Lys	Pho Tie Glu Pho 260 Arg Ala Leu	Tyr var Met 245 His Ser Ala Pro	Ala 230 Ser Glu Ser Lys Phe 310	Pro 215 Lys Asn Asp Ile Thr 295 Phe	200 Leu Ard Ser Thr Ala 280 Leu	Ala Inr Lys Leu 265 Val Gly Ala	Valuation Valuat	Lys 235 Leu Ser Leu Val	Leu 220 Asn Thr Thr Pho Val 300 Leu	205 Val Leu Luys Lys 285 Gly	Met Gru Arq Ala 270 Pho Met Ser	Tyr Ara Ile 255 Lys Ser Phe Leu	Cys Gly 240 His Gly Ard Ile Phe 320
184 185 186 187 188 189 190 191 192 193 194 195 196 197	Leu Arg 225 Val Ser His Glu Leu 305	Gly 210 Val Met Lys Asn Lys 290 Cys	195 Ser Tyr Lys Asn Pro 275 Lys	Pho Tie Glu Pho 260 Ard	Tyr var Met 245 His Ser Ala Pro	Ala 230 Ser Glu Ser Lys Phe 310	Pro 215 Lys Asn Asp Ile Thr 295 Phe	200 Leu Ard Ser Thr Ala 280 Leu	Ala Inr Lys Leu 265 Val Gly Ala	Valuation of the value of the v	Lys 235 Leu Ser Leu Val	Leu 220 Asn Thr Thr Pho Val 300 Leu	205 Val Leu Luys Lys 285 Gly	Met Gru Arq Ala 270 Pho Met Ser	Tyr Ala Ile 255 Lys Ser Phe Leu Trp	Cys Gly 240 His Gly Ard Ile Phe 320
184 185 186 187 189 190 191 192 193 194 195 196 197 198 199	Leu Arg 225 Val Ser His Glu Leu 305 Ser	Gly 210 Var Met Lys Asn Lys 290 Cys	195 Ser Tyr Lys Asn Pro 275 Lys Trp	Pho Glu Pho 260 Arg Ala Leu Lys	Tyr var Met 245 His Ser Ala Pro	Ald 230 Ser Glu Ser Lys Phe 310 Pro	Pro 215 Lys Asn Asp Ile Thr 295 Phe Asp	200 Leu Arg Ser Thr Ala 280 Leu Ile Ala	Ala Inr Lys Leu 265 Val Gly Ala Val	Valuation of the value of the v	Lys 235 Leu Ser Leu Val Pro 315 Lys	Leu 220 Asn Thr Thr Pho Val 300 Leu Val	205 Val Leu Lys Lys 285 Gly Gly Val	Met Gru Arq Ala 270 Pho Met Ser	Tyr Ala Ile 255 Lys Ser Phe Leu Trp 335	Cys Gly 240 His Gly Ard Ile Phe 320 Leu
184 185 186 187 188 189 190 191 193 194 195 196 197 207 201	Leu Arg 225 Val Ser His Glu Leu 305 Ser	Gly 210 Var Met Lys Asn Lys 290 Cys	195 Ser Tyr Lys Asn Pro 275 Lys Trp	Pho Glu Pho 260 Arg Ala Leu Lys	Tyr var Met 245 His Ser Ala Pro	Ald 230 Ser Glu Ser Lys Phe 310 Pro	Pro 215 Lys Asn Asp Ile Thr 295 Phe Asp	200 Leu Arg Ser Thr Ala 280 Leu Ile Ala	Ala Inr Lys Leu 265 Val Gly Ala Val	Valuation of the value of the v	Lys 235 Leu Ser Leu Val Pro 315 Lys	Leu 220 Asn Thr Thr Pho Val 300 Leu Val	205 Val Leu Lys Lys 285 Gly Gly Val	Met Gru Arq Ala 270 Pho Met Ser Phe Cys	Tyr Ala Ile 255 Lys Ser Phe Leu Trp 335	Cys Gly 240 His Gly Ard Ile Phe 320 Leu
184 185 186 187 188 189 190 191 192 193 194 195 196 197 207 201 207	Leu Arg 225 Val Ser His Glu Leu 305 Ser Gly	Gly 210 Var Met Lys Asn Lys 290 Cys	195 Ser Tyr Lys Asn Pro 275 Lys Trp Leu Phe	Pho Glu Pho 260 Ard Ala Leu Lys Asn 340	Tyr var Met. 245 His Ser Ala Pro 325 Ser	Ala 230 Ser Glu Ser Lys Phe 310 Pro	Pro 215 Lys Asn Asp Thr 295 Phe Asp	200 Leu Arq Ser Thr Ala 280 Leu Ile Ala Asn	Ala Inr Lys Leu 265 Val Gly Ala Val	Value of the state	Lys 235 Leu Ser Leu Val Pro 315 Lys	Leu 220 Asn Thr Thr Phe Val 300 Leu Val	205 Val Leu Lys Lys 285 Gly Val Pro	Met Gru Arq Ala 270 Pho Met Ser Phe Cys 350	Tyr Ala Ile 255 Lys Ser Phe Leu Trp 335 Ser	Cys Gly 240 His Gly Ard Ile Phe 320 Leu Ser
184 185 186 187 188 189 190 191 193 194 195 196 197 207 201 201 201	Leu Arg 225 Val Ser His Glu Leu 305 Ser Gly	Gly 210 Var Met Lys Asn Lys 290 Cys	195 Ser Tyr Lys Asn Pro 275 Lys Trp Leu Pho Pho	Pho Glu Pho 260 Arg Ala Leu Lys	Tyr var Met. 245 His Ser Ala Pro 325 Ser	Ala 230 Ser Glu Ser Lys Phe 310 Pro	Pro 215 Lys Asn Asp Thr 295 Phe Asp	200 Leu Arq Ser Thr Ala 280 Leu Ile Ala Asn Met	Ala Inr Lys Leu 265 Val Gly Ala Val	Value of the state	Lys 235 Leu Ser Leu Val Pro 315 Lys	Leu 220 Asn Thr Thr Phe Val 300 Leu Val	205 Val Leu Lys Lys 285 Gly Val Pro	Met Gru Arq Ala 270 Pho Met Ser Phe Cys 350	Tyr Ala Ile 255 Lys Ser Phe Leu Trp 335 Ser	Cys Gly 240 His Gly Ard Ile Phe 320 Leu Ser
184 185 186 187 188 189 190 191 193 194 195 196 207 201 202 204	Leu Arg 225 Val Ser Glu Leu 305 Ser Gly	Gly 210 var Met Lys Asn Lys 290 Cys Thr Tyr	195 Ser Tyr Lys Asn Pro 275 Lys Trp Leu Phe 355	Pho Glu Pho 260 Arg Ala Leu Lys Asn 340 Lys	Tyr var Met. 245 His Ser Ala Pro 325 Ser Arq	Ala 230 Ser Glu Ser Lys Phe 310 Pro Cys Ala	Pro 213 Lys Asn Asp Thr 295 Phe Lou Phe	200 Leu Arq Ser Thr Ala 280 Leu Ile Ala Asn Met 360	Ala Inr Lys Leu 265 Val Gly Ala Val Pro 345 Arg	Value of the service	Lys 235 Leu Ser Leu Val Pro 315 Lys 11e Leu	Leu 220 Asn Thr Thr Phe Val 300 Leu Val Tyr	205 Val Leu Lys Lys 285 Gly Val Pro Cys 365	Met Gru Arq Ala 270 Phe Met Ser Phe Cys 350 Gln	Tyr Ala Ile 2005 Lys Ser Phe Lou Trp 3005 Ser Cys	Cys Gly 240 His Gly Ard Ile Phe 320 Leu Ser Ard
184 185 186 187 188 189 190 191 193 194 195 196 207 201 202 204	Leu Arg 225 Val Ser Glu Leu 305 Ser Gly	Gly 210 var Met Lys Asn Lys 290 Cys Thr Tyr	195 Ser Tyr Lys Asn Pro 275 Lys Trp Leu Phe 355	Pho Glu Pho 260 Ard Ala Leu Lys Asn 340	Tyr var Met. 245 His Ser Ala Pro 325 Ser Arq	Ala 230 Ser Glu Ser Lys Phe 310 Pro Cys Ala	Pro 213 Lys Asn Asp Thr 295 Phe Lou Phe	200 Leu Arq Ser Thr Ala 280 Leu Ile Ala Asn Met 360	Ala Inr Lys Leu 265 Val Gly Ala Val Pro 345 Arg	Value of the service	Lys 235 Leu Ser Leu Val Pro 315 Lys 11e Leu	Leu 220 Asn Thr Thr Phe Val 300 Leu Val Tyr	205 Val Leu Lys Lys 285 Gly Val Pro Cys 365	Met Gru Arq Ala 270 Phe Met Ser Phe Cys 350 Gln	Tyr Ala Ile 2005 Lys Ser Phe Lou Trp 3005 Ser Cys	Cys Gly 240 His Gly Ard Ile Phe 320 Leu Ser Ard

PATENT APPLICATION: US/10/054,616A

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Input Set. A:\033072-022.ST25.txt
Output Set: N:\CRF4\10312002\J054616A.raw

		Thr 385	Tyr	Arg	Pro	Trp	Thr 390	Arg	GLY	Gly	Ser	Leu 395	Glu	Arg	ser	Gln	Ser 400
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	13 14	Ala	Gln	Pro 435	Pro	Leu	Glu	Leu	Cys 440	Ala	Tyr	Pro	Glu	Trp 445	Lys	ser	Gly
5	15	Ala	Leu 450	Leu	Ser	Leu	Pro	Glu 455	Pro	Pro	Gly	Arg	Arg 460	Gly	Arg	Leu	Asp
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	19 20	Gly	Thr	Glu	Glï	Asp 435	Alá	Ser	Asn	Gly	Gly 490	Cys	Asp	Ala	Thr	Thr 495	Asp
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2	56			Gly	180					185					190		
	57 58	Lys	Glu	Cys 195	Gly	Val	Thr	Glu	Glu 200	Pro	Phe	Tyr	Ala	Leu 205	Phe	Ser	Ser

VERIFICATION SUMMARY

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